DOCUMENT RESUME

ED 174 160 HE 011 613

AUTHOR Mohrman, Kathryn, Ed.; And Others
TITLE Student Outcomes. The Forum for Liberal Education.
INSTITUTION Association of American Colleges, Washington, D.C.
PUB DATE Jun 79
NOTE 15p.
AVAILABLE FROM Association of American Colleges, 1818 R Street, N.W., Washington, DC 20009

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS College Curriculum; College Students; *Competence; Curriculum Development; *Curriculum Evaluation; *Educational Assessment; Educational Objectives; Essays; *General Education; Higher Education; Learning Experience; Liberal Arts; Measurement Instruments; Nontraditional Students; *Performance Based Education; Self Evaluation; Student Attitudes; Student Evaluation; *Student Testing; Writing Skills
IDENTIFIERS American College Testing Program; Brookdale Community College NJ; Council for Advancement of Experiential Learning; Educational Testing Service; Johnson State College VT; Our Lady of the Lake College TX; Piedmont Technical Institute SC; State University of New York Coll at Geneseo; State University of New York Plattsburgh

ABSTRACT

A variety of approaches to student outcomes in higher education are described and an essay on the topic is included in this bulletin. In the essay, "The Campus as a Learning Environment," Douglas Heath suggests the significance of such projects for liberal education in the broadest sense. The following programs are discussed: Institutional Program Evaluation and Assessment system at Brookdale Community College, New Jersey; Competency Learning Project at Our Lady of the Lake University, Texas; Departmental Curricular Review Based on Student Outcomes project at the State University of New York at Geneseo; Writing Competency Exam project at Johnson State College, Vermont; the Self-Assessment Program at State University of New York at Plattsburgh; Competency-Based General Education Project at Piedmont Technical College, South Carolina; and five assessment services programs. The following assessment services are described: the College Outcomes Measures Project of the American College Testing Program; the Fifty College Project of the Council for the Advancement of Experiential Learning; the Undergraduate Assessment Program of the Educational Testing Service; the Comprehensive Cognitive Assessment Battery of McBer and Company; and the Outcomes Structure of National Center for Higher Education Management Systems. Resource materials on the topic are also briefly described. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

AAC

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED174160

HE 011 613

The Forum for Liberal Education

forum

Association of American Colleges 1818 R Street, N.W., Washington, D.C. 20009

June, 1979

Kathryn Mohrman, *Editor*
John W. Hager, *Assistant Editor*
Leonard S. Goodman, *Research Intern*
Jacquelyn S. Litt, *Research Intern*

The Campus as a Learning Environment
Douglas H. Heath 1

Brookdale Community College ... 4

Our Lady of the Lake University .. 5

State University of New York at Geneseo 6

Johnson State College 7

State University of New York at Plattsburgh..... 8

Piedmont Technical College..... 9

Assessment Services 10

Resources 11

The *Forum for Liberal Education* is a topic-oriented publication featuring a subject of importance for liberal education in each issue. It does not endorse or evaluate institutional activity. Rather, it describes the various ways in which institutions of higher learning address important common concerns.

Student Outcomes

The words "student outcomes" mean many things to many people. Some focus on the specific knowledge or skills that students should acquire in a course or program, others look at long-term objectives for graduates, and additional researchers investigate the personality changes or maturation of students in college. The methodologies of outcomes programs vary also, from surveys and objective tests to personal interviews and case studies.

At the same time, institutions of higher education use the information about student outcomes in various ways. In competency-based programs, student performance is assessed by a variety of measurement instruments; graduation or completion depends upon successful demonstration of skills and competencies. In other colleges, the results of surveys and tests are used for academic and institutional planning. Still others use outcome studies to see how well students meet the institution's standard of the educated person. Some projects began, and for the most part remain, research rather than action programs.

This issue of Forum *reflects the variety of approaches to student outcomes in higher education. The institutional programs and commercial services listed here can only suggest the methods and uses for outcomes measures. In the essay, Douglas Heath suggests the significance of such projects for liberal education in the broadest sense.*

The Campus as a Learning Environment

by Douglas H. Heath
Professor of Psychology, Haverford College
(Adapted from Liberal Education, *May 1977)*

In 1957, Paul Jacob published a provocative book, *Changing Values in College*, in which he claimed that few colleges had much impact on the values, the character, of their students. I was concurrently studying the meaning of psychological maturity and competence and their determinants, particularly educational, with male students at Haverford College, one of the few institutions identified by Jacob as effective. I intensively studied how students became more mature (and a few immature, as well) as they moved from freshman to senior year as well as the enduring effects of college upon several decades of alumni. The results, published in my book, *Growing Up in College* (1968), challenged a number of my assumptions as a faculty member about what made a powerfully liberally educating environment and reshaped not only what I taught but also my views about what a liberal education should be.

What did I learn? First, I learned that the model of maturing comprehended the principal liberally educating effects that educational philosophers since Socrates had identified. Second, I found that the college had very powerful formative effects on its students that most faculty were not aware of. Third, I discovered that the pattern of immediate effects that appeared during college

was somewhat different from the effects that endured after the students had graduated. That is, some effects of college may not become stabilized and autonomous of the initial learning situation of the college and so not persist into the adult years, at least as saliently as they had appeared while in college. And fourth, the more powerful determinants of different facets of maturing were not quite what I, as a faculty member, had expected. A number of the determinants had never, in fact, been explicitly identified or discussed by the faculty in its educational planning. The consequence was that in subsequent faculty-board decisions about the structure of the college, decisions were made in ignorance about the real strengths of the college and their determinants that contributed to the college's more powerful enduring effects—a not uncommon process that occurs in most colleges without a self-conscious understanding of their own strengths and of their causes.

In 1974, I completed a longitudinal follow-up study of a *different* group of Haverford College alumni who had originally been studied when they were freshmen, upperclassmen, and in their early thirties. I was still pursuing the meaning of healthy growth and competence by studying adults and the reasons for their effectiveness. The results substantiated some of the earlier findings and clarified even more what a powerfully educating college does to its students, as well as what are the reasons for such effects. In short, my studies provide me with a theoretical rationale and some empirical data for asserting that if liberal education is to survive the next two decades, then those of us who are its stewards must abandon our obsession to educate too narrowly, too academically to educate more fully, more liberally.

It is clear from comparative studies of several institutions that colleges have varying patterns of effects on their students, that the pattern may change over historical time, and that the magnitude of the effects may vary from one college to another. That was Jacob's contention: most colleges did not produce much maturing on some of the central sectors of their students' character. How might we determine what the effects of an institution are? I have relied on psychological tests designed to assess the model of maturing and on carefully structured interview procedures which provide data about how students report they have changed since their entrance to college. For example, Haverford's principal maturing effects on its undergraduates were, in order, the integration of cognitive skills, symbolization of self-concept integration, symbolization and allocentric maturation of their personal relations and integration of self.

What is of interest is that the college's effects that persisted most saliently into adulthood were different from the effects as the undergraduates perceived them. For several decades of alumni, the principal enduring effects of Haverford were, in decreasing order, the stabilization of their self-concepts and values, the integration of their self-concepts and values, allocentric values and personal relationships. In my current study of thirty-three year old men, the subjects were asked to identify, by means of certain objective sorting procedures, the principal determinants of their maturing *since* graduation. Quite unexpectedly, of the fifty some determinants that affect adult maturing, 43% of the men identified Haverford College to have had a continuing effect on their development *after* they had left college. Using a variety of judgmental procedures, I found that Haverford ranked 9th, only two ranks below graduate and professional school in terms of its power to affect the men's growth *after* they had left college. The type of spouse they married and type of occupation were the two most potent determinants of their growth since college.

What were the principal enduring and continuing effects of their undergraduate experience upon their adult development? Confirming the general thrust of the earlier studies done in the fifties, the men reported the principal effects that mattered to them were, in order, the stabilization, symbolization and integration of their values and the integration of their cognitive skills. For example, a lawyer said that the college affected his values by providing him with a "bedrock . . . a foundation;" another said it provided "an anchor to windward;" a physician said, "It impressed upon me the worth of doing something right; it really set standards of excellence." And a teacher claimed that "the Quaker ideal came through more strongly than I realized . . . lingering impact. It is with me all the time. I don't think the content stayed with me. That's mostly gone. But the values have remained."

The second most important persistent effect of the alumni's liberal education was the symbolization of their values. The college sensitized the men to their values. As one army officer said: it "had a tremendous influence in forming my ethical opinions . . . made me realize the importance of having an ethical sense." And a biochemical researcher said that the college "really exposed me to authentic intellectual people who lived the life of the mind; this was very inspirational to me for it changed my perception of what intellectuality was."

The third and fourth major effects were furtherance of the integration of the men's values and of their intellectual skills. A surgeon said Haverford encouraged him to produce a "coherent value system of my own." The ethos of the college broadened and provided a balance to the men's later life. The men also valued the rigorous intellectual training they had received. In addition to qualities like relational thinking, they cited their increased reflectiveness and intellectual autonomy. But the college's distinctive, most salient, enduring effect was to alter permanently the character, the values and motives of many men.

How did the college transform so many of its students that its effects persisted for years in their lives as alumni? The most important determinant was the college's *religious-ethical tradition* which provided a vision of what a genuine community could be and which, for some alumni, as one lawyer said, provided inspiration and hope when confronting the cynicism and ruthlessness of the noncollegiate world. The college's Quaker values became the values of many alumni, although most of them neither identified themselves as Quaker nor thought of themselves as very religious. What were the values the men assimilated that may describe that "specific Quaker influence at work?" A sense of perfectibility that spurred them to work hard, consciously valuing excellence in what they did, and continuing to seek out challenges to grow; valuing creating purpose and meaning for their lives; being tolerant of diverse viewpoints, respecting the individuality of others, and seeking to serve and care for others and one's society; valuing being ethical persons and maintaining integrity; daring, in Quaker language, to witness to their values.

What was important to these men was that the specific values of the college's Quaker tradition did not contradict but reinforced the ethic of the classroom. The integration

of the academic with the social-moral values provided a consistently reinforcing set of expectations as well as the opportunity to practice such values in the different settings of the college. So the second important determinant of a powerfully liberally educating environment is *coherence* between the values of the institution and the way the values are implemented in the specific activities, including the classrooms, of the college. For example, during the fifties all students attended a weekly Quaker meeting for worship during which the entire community reflectively wrestled with religious-ethical concerns. Students were also required to take several philosophical courses that were value-centered as well as a freshman English course that dealt with key value issues through the study of literature. Finally, the students had created not only an academic but a social honor system which confronted them with the ethical consequences of their inter-personal relationships. A student could not escape reflecting about his values. It is the ethos of an institution, the tradition of its expectations, which when consistently implemented in community decision-making processes, conflict resolving methods, faculty lives and patterns of relationships with students that have powerful transforming effects on students.

A third related determinant of the college's potency was its *sense of community*, abetted by its small size, shared expectations, and self-conscious effort to consistently implement them, primarily through consensual decision-making procedures. An alumnus who was a university professor said that the effort "to create a community of close and honest relations," frequently not successfully, made the educational experience a powerful one for him. The research showed that three specific qualities of the college community were particularly potent: the intellectual expectations and hence the ethos of the faculty, roommates and close friends, and the college's small size. Students encountered each other in a variety of settings and there was the expectation that in such encounters they would discuss intellectual ideas. Such monastic intensity meant that students were rehearsing, arguing, practicing using ideas outside of the classroom, thus furthering the stabilization and automatization of the intellectual skills learned in the classroom. Given these powerfully formative experiences no wonder students developed deep attachments, not unalloyed of ambivalence, to the college that persisted through their life.

What suggestions do such studies provide about how to create more powerfully liberally educating colleges in the future, the primary key, I believe, to the survival of many?

First, I think college faculties must reassert and witness the historic purpose of a liberal arts education, namely, to further the maturing of a youth, which means as close attention to the development of his character as to his intellect. Contemporary faculty are fearful to assert that there are any values for which the academy stands and which are indispensable to a youth's ability to adapt to his future. I suggest that if we educate for maturing, and hence adaptability, we increase the *potential* of a student to live a more moral life. To enhance his ability to symbolize is to increase his potential to be honest; to further his allocentricism is to increase his potential for compassion; to further his integration is to encourage integrity; increasing stabilization nurtures commitment and steadfastness; and increasing autonomy may further courage. The values of honesty, compassion, integrity, steadfastness and courage are intrinsic, I would assert, to the intellectual quest. They are potential value consequences of educating for maturity.

Second, an institution must make explicitly clear the values for which it stands and then self-consciously find ways to consistently implement them in the selection of faculty, conduct of the classroom, faculty-student relations, and institutional decision-making. It is lack of clarity of expectation, inconsistency in implementation, and absence of a core group of faculty who witness in their lives the values intrinsic to a liberal education that fatally undermine an institution's power to affect the character of its students.

Third, a valid model of maturing that comprehends the traditional goals of educational philosophers and that predicts future adult adaptability more powerfully than traditional academic measures offers a powerful argument for the survival of liberal education in the next few decades. We stewards of liberal education have been remarkably impotent in persuasively clarifying to our constituency the adaptive powers of our legacy. Our power is not to be found, I suggest, in the traditional content of what we teach. To identify certain core content areas or bodies of information or traditional arts studies to *exclusively* define the meaning of a liberal education is the path to educational and institutional bankruptcy—if only because nowadays no two faculty can agree about what specific knowledge all students should learn. Educational philosophers emphasize attitudes and values, skills and qualities of personal relationships—not specific informational content—to be the goals of a liberal education. We need to recover that historical emphasis.

More specifically, I suggest that a powerfully liberally educating faculty in the future will be much more specific about the kinds of self-educating skills and values it expects its students to learn. I have begun to redefine the goals of each of my courses in terms of transferable skills for which I now teach more self-consciously and systematically, though still not as powerfully as I would like. Faculties need to identify what specific types of skills and values define their purposes and then alter how they teach and how their institutions are organized to more effectively educe such skills and values. What skills will students need in their information-communication and service-oriented world of tomorrow? The values and skills necessary to continue to educate themselves in their relationships with others. Skills like oral and written communication, induction, relational, critical thinking, interpersonal sensitivity, understanding, and empathy, self-organizational skills like setting one's own goals and evaluating their achievement.

Fourth, we who have stewardship of the liberal education tradition need to recreate more powerful social community forms of growth. My research is compellingly clear: it is the type and quality of close face-to-face interpersonal relationships which is the most powerful determinant of continued maturing.

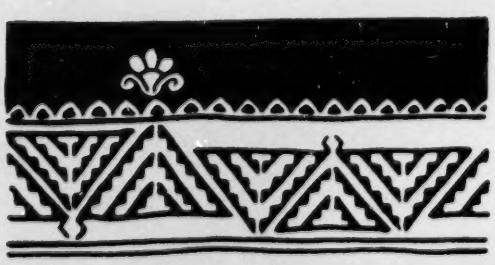
Administrators and faculty who believe a teacher's principal role is to be a lecturer, a didactic information dispenser, to passive students inaccurately transcribing and then forgetting what is said within a few days after an exam are prisoners of a conception of learning more appropriate to the days of monks in medieval universities like Bologna. Van Doren said the heart of becoming an educated person is to rear that third person in one's mind when having a dialogue with a second; meaningful educational

growth, as I have been describing it in a powerfully educating college, is an active participative dialogic social process whose meaningful effects are not ones measured by multiple choice questions on a fifty-five minute exam. The implications for the mode of classroom teaching are profound and wide ranging if we deeply understand this point.

And fifth, my studies suggest that a powerfully educating undergraduate in contrast to a graduate school is as deeply general, holistic, contextual in its approach to education as it is disciplinarily oriented. Recall that the principal effects of Haverford were to further integrative thinking, to view life from a multiplicity of perspectives, as Dewey suggested. However, increased disciplinary and academic specialization has brought not only increased parochialism but, more fatally, increased irrelevance to colleges. What are the adaptive problems our students and society will face in the future? Deeply contextual ones about ecology, energy, urban areas, population, third world issues, violence and peace, leisure, altered marital and parental relationships. Not one of these issues falls into our traditional departmentally organized curricula. Each requires learning how to view a problem from many different points of view, integrating diverse facts and values, and making mature judgments of better or worse, not decisions of right or wrong. Too many colleges are failing to keep pace in their curricular organization and mode of educating with the emerging structure of the future. We still face backwards to the departmental model of organizing knowledge, which while appropriate for a certain limited number of problems, is increasingly inappropriate for teaching the skills and educing the values necessary for adapting to the challenge of the decades ahead.

In concluding, my prescription not just for institutional survival, but for institutional vitality and renewal, is to return to our historic understanding of the liberally educating process. The uncertainty of our future as a species, the extraordinary value choices provoked by the rapidity of change that we face, will demand greater maturity and adaptability of our students tomorrow. If we continue to educate too narrowly, too technically, too reductively, if we continue to ignore a student's character, the skills and values of adaptability, and the contextuality of our survival problems, then our colleges deserve to not survive as liberally educating institutions.

Prescriptions for survival? Become more persuasively articulate about the qualities that enhance continued growth of our students throughout their adult lives, that further their future adaptability; these maturing qualities are the attributes educational philosophers have identified to be at the core of becoming liberally educated.



Brookdale Community College
Institutional Program Evaluation and Assessment

Brookdale Community College has established an extensive evaluation system of both short- and long-range surveys and reports to provide information for curricular review and planning. Conducted by the college's Office of Research, these assessment instruments gather data covering not only daily or course-related learning achievement, but also the more extended outcomes of career and lifestyle objectives

Brookdale's educational philosophy is based on the mastery of learning, in that successful learning is based on the meeting, by the student, of certain basic competency measures in each and any subject matter discipline. It stresses that the students have enrolled in order to learn to the best of their abilities, and that they should be allowed to learn at their own rates and in their own styles. To accommodate this approach, the college offers a variety of learning alternatives. In order not to punish past performance or educational background, no failing grades are given; those not meeting basic learning objectives get an incomplete grade of Withdraw, which is not entered on the official transcript. For those not meeting learning objectives in a term, a continuing grade of DCR gives the time needed to complete those objectives in the following term.

Because of this learning approach, a series of production reports is generated on a regular basis as short-term measures of the educational process. While numerous, the production reports provide a straightforward description of the various levels of achievement of the student body at any given time. These reports include an opening term enrollment report; a faculty load report; a cumulative achievement report, which assesses student progress since matriculation; a deferred credit report, to track how students are doing in completing course work from the previous term; a student progress regulation report, to monitor individualized instruction and self-pacing; a degrees awarded report; and finally, a retention study, which describes the characteristics of students not returning to Brookdale.

While these production reports present a good overview of the status of the educational process, they provide only an indirect look at student attitudes toward their studies. To acquire this information more directly, students complete an attitudinal survey, which records their satisfaction with Brookdale's instructional, counseling, and support services, and another survey to determine the difficulties encountered by students not succeeding in developmental courses.

While these short-term measures are necessary as immediate indicators of student and institutional success, they provide only a part of the information fed back into the educational revision and planning process. To complete the picture, two post-graduation surveys help to gauge Brookdale's effectiveness in meeting both its own and its students' expectations. A nine-month follow-up survey focuses on how graduates met their educational and career objectives, how they view their own self-growth, and how they judge the quality of Brookdale's services. A twenty-eight month follow-up survey provides a longer range perspective on these same questions. As an indicator

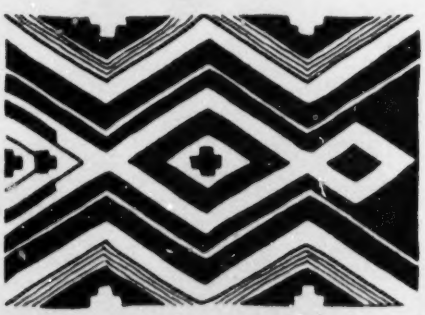
of the effectiveness of the college's career-preparation programs, employers of those responding to the nine-month survey are asked *not* the graduate's job performance, but rather Brookdale's preparation in terms of basic and job skills, general education, work habits, and attitude.

An analysis of a recent nine-month survey has raised important questions about basic assumptions of Brookdale's curricular objectives, its development, and its evaluation system. The survey showed that a significant number of vocational program graduates had chosen to continue their educations at four-year colleges; the cause of concern was not that the graduates were returning to school, but whether Brookdale had been meeting the objectives of its vocational students. To provide more data which might clarify these results, the Office of Research has designed a new and more complex questionnaire for use at the nine-month stage, which will seek more explicit information on how students define and structure their objectives. In addition, this new survey is open to additional input from the respondent and can accommodate personal perceptions of objectives. When the results of this survey are evaluated, the data will be useful in any reconsideration of Brookdale's vocational education processes.

Also revealed by the recent nine-month survey was a declining response rate to the questionnaire itself. Since the missing portion was sizable enought to influence the overall results, it has become necessary to determine the reasons for this lack of interest, particularly if it reflects a complete disenchantment with Brookdale. To resolve this problem, a system of personal interviews has been proposed which would seek not only the reasons for nonresponse, but also determine any misunderstanding of survey questions (and thus incorrect information) on the part of the responders.

Brookdale's program for evaluation and assessment functions at two levels in order to provide outcomes information back for curriculum evaluation. The use of production reports and attitude surveys has made the college more aware of curricular problems as encountered by its students, while the use of post-graduation surveys permits assessment of its overall impact upon learning and career objectives.

Contact:
Dr. Carl E. Feigenbaum, Director
Office of Research and Planning
Brookdale Community College
Newman Springs Road
Lincroft, NJ 07738
(201) 842-1900, ext. 216



Our Lady of the Lake University

Competency Learning Project

Our Lady of the Lake University is a small liberal arts college located in a poor section of San Antonio. In addition to a large percentage of ethnic minority students, the university has attracted large numbers of non-traditional students having diverse educational backgrounds, interests, and needs. To make education more accessible to these people, Our Lady of the Lake developed a competency-based curriculum and a number of appropriate support services.

A development committee report in 1970 recommended that the school adopt a curriculum based on the development of certain skills and competencies, a flexible calendar, and variable learning activities. The recommendations were accepted in 1971 and, as a first step, a new degree program was specified that would require graduates to show competence in four general areas of basic knowledge. Problems developed, however, because the competencies were not well-defined nor were criteria for assessment established; responsibility for certification of competency rested solely with the students and their advisors. The degree of competency of each student varied from one advisor to another.

Recognizing this problem, the university received a grant from the Fund for the Improvement of Postsecondary Education in 1974 to reformulate the curriculum and practice of the university around competency-based learning. An interdisciplinary committee and change agent team proceeded to redefine the objectives of the curriculum and to expand the learning alternatives at the school. In March 1975, six general education competency statements were adopted with which the university requires that its graduates: have developed effective communication skills; have acquired sufficient understanding of their everchanging physical environment to cope effectively with it and make responsive and intelligent judgments about it; have attained reflective and critical perspectives relative to their personal and interpersonal growth and the impact of culture and social institutions on human behavior; have achieved a reasoned, integrated understanding of the religious and ethical dimensions of human experience, both personal and social; have developed the ability to perceive and discriminate among artistic elements of their own and other cultures, and to describe and use their own creative processes; and have acquired an understanding of basic synoptic theories, have developed effective synoptic skills, and can apply these skills in formulating their world views. Assessment requirements and instruments for fulfilling each of these competencies were prepared by separate faculty teams. Students who feel that they already possess the knowledge and skills required by each area of competence may elect to take an external validation test in lieu of a competency validating course. Descriptions of each competence, its corollary components, the validation exam, and guidelines for exam preparation are available to all students. If a student fails the exam, retesting is allowed no sooner than two months after the initial exam to allow time for better preparation and development of the required skills. As a result, the competency program has in-

creased the clarity and meaning of objectives for student learning, and also increased students' responsibility for planning and managing their educational programs.

Changes have been made campus-wide because of the competency program. Curriculum change is one example of this impact; in addition to the development of courses specifically related to the competencies, some existing courses have been rearranged to allow students to demonstrate mastery of one unit of the material before proceeding on to the next. Students may take longer than a semester for completion of a course or may test out of it and thus accelerate its completion. In addition, all faculty must state course objectives in terms of learning outcomes for students. When a new course is to be considered as a validation of a general education competence, its instructor must describe not only its learning objectives, but also the assessment procedures and instruments designed to insure a realistic evaluation of student performance. The process of faculty reviewing their courses in light of stated learning outcomes has led to a revitalization of numerous traditional courses.

The system of academic advising had caused some problems under the earlier competency program because it lacked uniformity and consistency. As a result, it was restructured from a system where almost all faculty advised students to one where only a core of faculty advise students. These new advisors underwent special training sessions in preparation for these duties; at the same time, an advising handbook was developed, giving full information on competency requirements, degree plans, and other academic programs.

Because a competency-based curriculum shifts emphasis from the delivery system to the learning outcome, a variety of alternative educational methods have become availalbe for non-traditional students. In addition to self-paced courses, special conferences and workshops are conducted in response to specific educational needs. Open registration allows enrollment in courses which are not time-bound and permits students who finish a course before the end of a semester to begin work on new courses. Programmed instruction and audio-tutorial materials are available for basic or supplemental instruction on many subjects. Also, workshops are regularly conducted for adult learners preparing portfolios for life-work experience on the CAEL model. Since the implementation of the competency-based program, enrollment of non-traditional students has increased.

To accommodate this open, flexible academic program, it became necessary to design a data support system to keep track of varied registration, financial aid, and billing information. A computer support system was designed and implemented in 1976 to provide capability for off-campus registration, individualized student program data, and alternative record-keeping techniques.

Our Lady of the Lake University is continuing the development of programs that are a result of the institution of a competency-based curriculum. Some majors are now being defined in terms of competencies. Special programs for transfers and freshmen students orient them to the competency approach while improving those basic skills necessary for college-level work. Continuing refinement of assessment procedures is taking place, including participation in the COMP/ACT project. In all, the competency learning program has provided a significant and efficient alternative to traditional educational curricula by insuring that all learners' needs are effectively served.

Contact:
Sr. Virginia Clare Duncan
Assistant Dean
Our Lady of the Lake University
411 S.W. 24th Street
San Antonio, TX 78285
(512) 434-6711, ext. 159

State University of New York at Geneseo

Departmental Curricular Review Based on Student Outcomes

Under the direction of its Office of Institutional Research, SUNY-Geneseo developed a self-assessment project providing feedback into its curricular decision-making process. Recognizing that previous assessment activities were largely ad-hoc exercises responding to current problems or need-to-know requests, the project assembled a base of student outcomes data for use in departmental curriculum review and planning. The project was developed on a two-year pilot basis in 1976, in cooperation with the New York State Education Department's Self-Assessment Project, to accomplish four short-range goals: to provide better understanding of a department's undergraduate clientele in terms of abilities, expectations, and satisfactions; to foster departmental morale as a result of better communication between students and faculty; to develop a data base on post-graduation experiences of students; and to provide a greater awareness of the post-graduation realities experienced by students.

The major thrust of the project was the collection and dissemination of data back to the departments. Majors in eight departments were surveyed, using both standardized and locally-developed instruments, at three different times: at the start of their junior year they completed a "choice of major"survey and an educational priorities questionnaire; at the end of their senior year they completed a "satisfaction with major" scale and an "educational benefits" evaluation; two years after graduation a follow-up survey recorded their assessment of their education in relation to work or graduate school experiences.

It became necessary to make refinements in the methods of questionnaire distribution when the response rate proved to be lower than expected. The personalized letters of invitation to participate in the project gave way to faculty distribution of the surveys in their classes; eventually, they were distributed and collected either by resident assistants in college housing or via mail for commuters.

Once the data were collected, a series of four seminars for chairpersons and institutional research staff provided a context for evaluating these results. The surveys of students and graduates have provided a number of interesting insights into the students' perceptions of their education. On the whole, they were satisfied with their choice of major, but expressed a desire for more assistance in preparing

for and obtaining jobs after graduation. Positive responses concerning the benefits of their education appeared to be discipline-related; for example, art majors were pleased with their aesthetic development, English majors with their literary appreciation, and biology majors with their scientific inquiry. However, interdisciplinary comparisons reflected general education shortcomings in that the biologists felt a deficiency in writing skills, and English majors lacked an appreciation for scientific inquiry. Department chairpersons involved in the project found the perspective provided by the surveys to be useful for evaluation and planning purposes. Departmental strengths and weaknesses were more evident, particularly when survey results were compared to those of other departments.

Although the concept of departmental curricular review based on student feedback was developed as a model for use by other departments and other institutions, the project has not been continued beyond its pilot phase. The low percentage of student response, which was one factor in this decision, was puzzling when compared to the significantly higher rates of other institutional research surveys. While the involvement of departmental chairpersons was crucial for departmental support of the project, it was found that greater communication with the rest of the faculty would have broadened support for the project. The data which have been supplied, however, have provided a basis for evaluation and review procedures in some of the departments involved, and thus shown the potential of an outcomes/feedback program.

Contact:
James L. McNally
Director
Office of Institutional Research
SUNY-Geneseo
Geneseo, NY 14454
(716) 245-5211

Johnson State College
Writing Competency Exam

Many colleges and universities have chosen to include a proficiency in writing skills among their desired student outcomes. While some institutions see the development and certification of this proficiency as the responsibility of courses and examinations in their departments of English, Johnson State has developed a required writing competency examination which places this responsibility for assessing and teaching these skills upon faculty in all disciplines.

The writing competency exam, designed with funding assistance from the Fund for the Improvement of Postsecondary Education, was chosen as a uniform method of judging attainment of a specified minimum standard of writing. It was felt that a letter grade in a course is often an unsatisfactory indication of writing skills since it often reflects such extraneous factors as student effort and attendance, or an instructor's individual standards. Four criteria were used in designing the exam: it should judge ability to create discourse and not solely the ability to recognize grammatical errors; it should yield specific evaluative information, specifically distinguishing the rhetorical and grammatical errors; it should involve faculty from all academic divisions in its design and in the evaluation of the student essays; and it should serve a diagnostic as well as evaluative function, giving students specific information about their performance. It was determined that the exam would assess those skills necessary for almost any type of writing for a public audience, as well as one conceptual skill a liberal arts graduate should possess: the ability to write analogically, developing a point through a sequence of generalizations, not just a narrative or descriptive sequence.

The exam lasts three hours and has two parts: an essay of approximately 500 words in response to a specific question, and the editing of a passage to correct common grammatical errors. In order to be judged proficient, the exam must pass both grammatical and rhetorical evaluations. The grammatical evaluation counts certain common errors in the essay such as sentence fragments, apostrophe errors, subject-verb agreement and pronoun reference, and misspellings. The editing part of the exam further demonstrates that the student knows how to correct these errors. The rhetorical evaluation judges how successfully the essay responds to the demands of the question. Students select one essay topic from a list of four choices, which is made available in advance. An explanation accompanying the questions specifies the topic, the purpose of the essay, and the attitude of the audience. Questions are open enough to allow room for definition in terms of the student's own experiences, but specific enough to define the task concretely no matter what experiences are discussed. Some pilot-testing of the essay questions has become necessary and desirable to insure that they are specific enough to be understood and structured so as to produce the intended purposes of the exam.

The essay is intended to reflect the skills of a college senior. Students are required to take the exam during their sophomore year to insure that the writing requirement will be met by graduation. If the student fails the exam, there is ample time to acquire the skills necessary to complete it successfully. There is no penalty in failing the exam; it can be retaken at future sessions until it is passed.

Essays are evaluated independently by two faculty readers; a third reader is used only if the first two differ widely in their rating of an essay. Prior to evaluating the essays, the readers go through a training period at which time they are provided with a guide that includes the essay task, the rhetorical criteria, and "range-finders," sample essays which illustrate the rating system. The rhetorical procedure used here does not assume a normal curve distribution and every attempt is made to maintain a consistent standard from one test administration to another. Ultimately, the essay should show whether the student can write to a specific purpose as judged by specific, descriptive criteria.

There are recognized limitations to the writing competency examination. It is not a comprehensive measure of a student's writing skills, but rather a judgment of one type of writing that the college expects of all of its graduates. Secondly, the evaluation of writing skills takes place in an artificial setting. The type of writing and topic are imposed, the time limit constricts the writing process, and the essay has no other purpose than to be judged. Nevertheless, the requirement of the exam underscores the importance which the college places on specific writing skills. It

is useful as a diagnostic as well as an achievement test, providing the guidance for improvement of the skills which are lacking. Finally, the involvement of faculty from many disciplines demonstrates their shared responsibility for the development of specific writing skills among their students.

Contact:
Anne J. Herrington
Johnston State College
Johnson, Vermont 05656
(802) 635-2356, ext. 351

State University of New York at Plattsburgh
Self-Assessment Program

The Office of Institutional Research and Analytical Studies, together with a campus-wide Outcomes Committee at SUNY-Plattsburgh, has developed a series of surveys as part of a self-assessment program. The educational process is examined through student outcome surveys and case studies. Data obtained provides a general resource for curricular decision-making, recruitment and admissions policies, and other institutional planning procedures. While a number of techniques have been employed successfully, Plattsburgh is continually refining and revising the survey procedure in order to collect and use student outcome data more effectively.

In 1973, a Senior Evaluation Survey was administered to all graduating seniors. Designed to collect information about perceptions of achievement, the survey measured students' educational, intellectual, personal, social and professional/vocational growth. Subsequently, the committee found that the self-assessment programs would be more effective by including the expectations of incoming freshmen. As a result, a New Student Survey, requesting information about expectations for educational, professional and social development, was created and administered to the freshman class of 1974. The data collected served as a base for a subsequent longitudinal study of the class of 1978.

In the fall of 1975, a Student Biographical Inventory was added to the evaluative material distributed to incoming students. Derived from the Program Effectiveness and Related Costs Model developed at Empire State College, the inventory asked for descriptive material on parents' income and education, as well as students' ratings of their personal abilities and activities. This inventory was designed to discern if a pattern would emerge between a student's biographical history and his personal expectations. Concurrently, the New Student Questionnaire was developed and distributed to freshmen and transfer students. This questionnaire collects demographic and other background material, such as the students' rationale for choosing Plattsburgh. In the effort to avoid "over testing" the incoming freshman, these three surveys have been modified and combined into one Freshman Survey. In addition, the case-study approach was introduced in an attempt to synthesize the information compiled, which facilitated a closer inspection of personal history in relation to expectations and achievements.

Plattsburgh has incorporated two additional surveys within the outcome measurement system. The Sophomore Experience Survey, an abbreviated form of the Student Biographical Inventory, is designed as a follow-up to the Freshman Survey, and should indicate such trends as how soon, and in which ways, the college experience can affect the student. In addition, an Alumni Survey was developed, which evaluates the college experience and measures occupational data and career satisfaction.

The initial phase of the Outcomes Project emphasized data collection. However in 1976-77, the emphasis shifted from collection to the dissemination and utilizations of the data obtained. With the aid of the New York State Education Department Self-Assessment for Colleges and Universities Project, Plattsburgh worked toward a more comprehensive understanding of the impact of the data on departmental decision-making. Consequently, a methodology for presenting the data was developed which consisted of departmental profiles derived from various sources, such as the Student Data Base, the Induced Course Load Matrix, Admissions Files, and the different student outcome measures. These profiles also included a cross-sectional study of freshman expectations and senior achievements.

In June 1977, a college-wide meeting of all chairpersons, deans and the academic vice-president was held to review and evaluate the material compiled. Due to a lack of faculty response and enthusiasm, the committee members were forced to reassess their presentation. They discovered that their approach was too global and impersonal, and realized that by concentrating on a select number of departments, they could obtain interaction and response. The departments of art, biology, education, nursing and psychology were selected to represent a cross-section of college offerings.

The five departments agreed to administer outcome instruments, as well as traditional and non-traditional testing procedures, such as those measuring the process of cognitive development, which had been found to have an enduring effect. The biology department administered the Undergraduate Program Field Test as part of a scheduled seminar. These scores will be correlated with previous information collected, such as personal expectations and other background information. The search for "hard" achievement data, which can be incorporated in a cost-effective manner into academic programs, is still in progress.

The integration of various outcome measures, such as longitudinal survey results, standardized test results, admissions data, and questionnaire data, has prompted Plattsburgh to develop a comprehensive data base and accordingly, to design an SPSS computerized system.

The past two years of the Self-Assessment Program have stressed a personal and practical approach in the collection and dissemination of outcome material. Faculty enthusiasm and support have been essential in the development and success of the program. The student outcome data have proved to be a valuable resource used in virtually all areas of institutional policy planning.

Contact:
Diana M. Green
Institutional Research and Analytical Studies
SUNY-Plattsburgh
Plattsburgh, NY 12901
(518) 564-3102

Piedmont Technical College
Competency-Based General Education Project

In assessing the role of its general education program, Piedmont, a two-year college, faced two questions: what general, non-technical capacities should its graduates possess, and how can it provide these capacities effectively and efficiently? The answers to these questions came as part of a 27-month program of discussions, definitions, and curriculum development to produce a competency-based general education program.

The program, funded with support from the Fund for the Improvement of Postsecondary Education, was divided into four phases: design (eight months), development (six months), testing (nine months), and refinement (four months). The design phase focused on the problem of choosing the competencies to be included in the general education program. A task force of seven faculty members investigated successful competency-based education programs at a number of other institutions. Major surveys were conducted of faculty, students, graduates, and selected workers in Piedmont's seven-county service area to determine communication skills and needs, desired personal/interpersonal qualities of a "competent" person, and traits considered important for success in career and non-career settings. In addition, a three-person educational audit team of experts in competency-based education provided the task force with ideas for specific parts of the program.

Eight competencies were chosen, of which communications was given top priority. Of the remaining seven, further analysis of the consistency of each with Piedmont's institutional mission combined with presentational difficulties to eliminate all but one: reasoning. The task force determined also that these two competencies should be delivered in discrete courses rather than through infusion into several existing courses, and thus minimizing disruption to the entire curriculum.

During the development phase, these design decisions were transformed into course materials, schedules, and assignments. It was agreed that the communication competency courses would be tested on students in three technical programs, and that program personnel would participate in the evaluation of this phase. The communications competency evolved into three discrete courses. The first course cross-related four forms of communication (reading, writing, listening, and speaking) with six informational activities (receiving objective reports, reporting objectively, giving directions, following directions, describing, and explaining); the second focused on systematically manipulating information by using skills developed in the first course; the third used career decision-making as the context for a refinement of communication skills. The reasoning competency skills courses (which were later combined from three into one) were designed around skills to enable students to analyze situations successfully, make decisions, take positions, solve problems, and apply prior learning in career, personal, academic, and community contexts. Course activities emphasized the wide applicability of these skills beyond the academic setting.

Also during this development phase, evaluation designs and instruments were prepared for use during the pilot testing of the competency courses. When no existing standard instrument was found to measure Piedmont's intended outcomes, the college was forced to develop its own. In addition, it was necessary to obtain state approval for these courses, to revise syllabi and course descriptions, and to recruit instructors.

The pilot testing of the program occurred during the three quarters of the 1976-77 school year. The initial reasoning course was team taught to four sections, with the faculty meeting weekly to review the course and make necessary corrections; more complete changes were made and tested on a single class during the winter quarter. Some confusion resulted from the varied approaches to each of the reasoning courses, and it was determined to revise them into a single course. The communications courses underwent only slight modification during their initial offering.

The final phase of the program was expected to focus on revision and retesting of each competency and an analysis of the evaluation data. In fact, the reasoning competency was modified to emphasize eleven discrete skills, an increase over the five skills in the original courses; the course is now taught by individual instructors rather than teams, and initial results suggest that the revised format is more attractive and effective than the earlier version. Only minimal revisions were possible in the communications courses, however, since the faculty members responsible for their development and instruction left Piedmont at the close of the academic year; some changes will probably occur as the present instructors become more familiar with the course materials.

On the whole, the evaluation and analysis of the project has been encouraging. A sizable majority of students were positive about their experiences in the communications and reasoning competency courses, particularly in the applicability of the skills acquired in these courses to activities outside the classroom. In one instance, a student interview revealed that the subject had used his reasoning skills to successfully justify dropping a course that his advisor thought he should continue. Another possible indicator of student acceptance has been an attrition rate no greater (and in some cases less) than for other courses. Project instructors have been similarly pleased with the new courses, finding them to be workable and valuable to the students; the extra time required for periodic evaluation reports was not found to be excessive. A faculty audit team concluded that the reasoning competency produced an improved capability to use a systematic approach to problem solving, while the communications courses noticably improved students' abilities to speak and write effectively. The audit team also pointed out an absence of student complaints about required English courses, in contrast to the general dissatisfaction of previous years.

In addition to an improved general education program for its students, Piedmont has benefited from a number of institutional outcomes resulting from this program. Primary of these was the identification of key general education competencies which are feasible for Piedmont to deliver, and the creation of a system assuring the delivery of each in an efficient manner to all students. In turn, students had greater opportunities to select learning opportunities relating to their own interests and programs, and thus a clearer sense of what they were learning and how to apply it. Because of the learning experiences conected with the process of designing a competency-based education program, Piedmont now has an increased capacity for cur-

riculum development, instructional design, and evaluation; the college found that faculty participants became more aware of deep-seated student learning needs and problems, while discovering a heightened confidence in their own abilities to ask fundamental educational questions.

The insights gained from this project have led to an institutional commitment to competency-based education and the use of reasoning-instruction to encourage learning; for example, Piedmont has begun a five-year program to place all of its instructional programs on a competency basis. Moreover, the reasoning competency has become institutionalized as a permanent part of Piedmont's instructional program, operating through a newly-created Center for Reasoning Studies. Finally, the project has opened up new channels of communication with other institutions: contacts with schools having competency-based programs have been maintained for a sharing of ideas in other areas of concern, while a number of requests have been received for both specific program information and for workshop presentations.

Contact:
Curtis Miles, Director
Center for Reasoning Studies
Piedmont Technical College
Greenwood, SC 29646
(803) 223-8357

Assessment Services

American College Testing Program

The College Outcome Measures Project

The College Outcome Measures Project, funded primarily by the Fund for the Improvement of Postsecondary Education, is designing assessment instruments to measure the knowledge and skills that undergraduate students are expected to acquire as a result of general and liberal education programs. In addition, the instruments assess skills that are important to effective functioning in adult society. The areas measured are: communicating, solving problems, clarifying values, functioning within social institutions, using science and technology, and using the arts.

The COMP Program has developed three assessment instruments. The Measurement Battery involves a series of stimulus materials, activities, and questions often requiring students to provide their own answers rather than selecting from provided responses. While the entire battery takes six hours, colleges can select portions to reflect special interests or needs. The Objective Test is an effort to create a machine-scored proxy for the Measurement Battery. The Activity Inventory asks students about the quantity and quality of their participation in adult roles in college as predictors of their future levels of performance.

The COMP instruments are being tested and validated at a wide range of institutions throughout the country.

For more information, contact:
Aubrey Forrest
Director, Instructional Design and Assessment
American College Testing Program
2201 North Dodge Street
P.O. Box 168
Iowa City, Iowa 52240

Council for the Advancement of Experiential Learning

Fifty College Project

The project focuses on training faculty and equipping them with aids to the mapping of intended learning outcomes and prerequisites to students' achieving those outcomes. In keeping with CAEL's emphasis upon the values of learning in which the student works directly with the realities studied, the project gives special emphasis to the learning outcomes best developed in such experiences and to their part as prerequisites to terminal competence in particular fields of study and professions. One of the products of the project will be a set of workbooks that will be usable by both students and faculty members in planning their courses of study and in finding efficient ways to demonstrate the results of the learning.

For more information, contact:
The Council for the Advancement of
Experiential Learning
American City Building
Suite 208
Columbia, MD 21044
(301) 997-3535

Educational Testing Service

Undergraduate Assessment Program

The Undergraduate Assessment Program offers 48 different standardized tests for use in measuring the abilities of college sutdents. In addition to the Graduate Record Examination Advanced Tests, the program provides field tests in 23 disciplines in which undergraduates frequently major, the UP Aptitude Test (similar to SAT or GRE verbal and quantitative sections) and examinations in three broad areas of the liberal arts: social science, natural science, and humanities. The questions on the area tests are designed to measure students' intellectual abilities as well as their knowledge of specific content.

Since 1976, over 300 colleges and universities have used aspects of the Undergraduate Assessment Program to provide comprehensive general education examinations, to assist with curriculum redesign, to use in academic counseling and to serve as the basis for longitudinal studies. Scores are reported in a variety of ways, including breakdowns for subgroups of the student body, such as seniors majoring in the humanities.

For more information, contact:
Eldon Park
Acting Program Director
Undergraduate Assessment Program
ETS
Box 2836
Princeton, NJ 08541
(609) 921-2294

The Forum for Liberal Education

forum

Association of American Colleges 1818 R Street, N.W., Washington, D.C. 20009

Index

The Forum for Liberal Education

Volume I, October 1977 - June 1979 (nine issues)

Essays

Fleishman, Joel L. "Public Policy Studies as Liberal Education." March 1979.

Gollattscheck, James F. et al. "Cooperating with Community Organizations."
(Adapted from *College Leadership for Community Renewal: Beyond Community-Based Education.* San Francisco: Jossey-Bass, 1976.) May 1978.

Hartman, Donald T. "Developing a Core Curriculum." October 1977.

Hazzard, George W. "Knowledge Integration in Undergraduate Liberal Learning." May 1979.

Heath, Douglas H. "The Campus as a Learning Environment." (Adapted from *Liberal Education.* May 1977.) June 1979.

Leestma, Robert. "Global Education." (Adapted from *American Education,* June 1978.) January 1979.

Lockwood, Theodore D. "A Skeptical Look at the General Education Movement." November 1978.

Stoel, Carol. "Creating Successful Liberal Education Programs for Adults." October 1978.

Wee, David. "Values in the American College." March 1978.

Featured Institutions

Alice Lloyd College, Pippa Passes, KY "Appalachian Services." May 1978.

Alverno College, Milwaukee, WI "Competence-Based Education." March 1978.

Arkansas College, Batesville, AR "Grassroots Government." May 1978.

Bethel College, North Newton, KS "Rural Development in Emerging Countries." January 1979.

Boston University, College of Liberal Arts, Boston, MA "The College Program for Liberal Arts." October 1977.

Bowdoin College, Brunswick, ME "Senior Center." November 1978.

Brigham Young University, Provo, UT "Institutional Program Evaluation and Assessment." November 1978.

Brookdale Community College, Lincroft, NJ "Institutional Program Evaluation and Assessment." June 1979.

Bunker Hill Community College, Charlestown, MA "The Open College." October 1978.

California State University at Long Beach, Long Beach, CA "Adult Reentry Counseling." October 1978.

University of California at Los Angeles, Los Angeles, CA "Program in Medicine, Law, and Human Values." March 1978.

City Colleges of Chicago, Chicago, IL "Contemporary Course in the Humanities." October 1977.

The Claremont Colleges, Claremont, CA "Interdisciplinary Holistic Teaching/Learning." May 1979.

Colby College, Waterville, ME "Regional and Canadian Studies." January 1979.

Cornell University, Ithaca, NY "International Performing Arts." January 1979.

Dartmouth College, Hanover, NH "Policy Studies." March 1979.

Donnelly College, Kansas City, KS "One World Program." January 1979.

George Washington University, Washington, DC "Continuing Education for Women." October 1978.

Governors State University, Park Forest South, IL "Seminar in American Institutions and Values." March 1978.

Gustavus Adolphus College, St. Peter, MN "A Program to Strengthen the Humanities at Gustavus Adolphus College." November 1978.

Illinois Central College, East Peoria, IL "The DOORS Program." November 1978.

Indiana University at Kokomo, Kokomo, IN "External Degree/Project Outreach." October 1978.

Johnson State College, Johnson, VT "Writing Competency Exam." June 1979.

Lakeland College, Sheboygan, WI "Interdisciplinary Core Curriculum." May 1979.

Lehigh University, Bethlehem, PA "Humanistic Perspectives on Technology." May 1979.

Los Medanos College, Pittsburg, CA "General Education Program." October 1977 and November 1978 (update).

Marist College, Poughkeepsie, NY "Science of Man Program." May 1979.

Massachusetts Institute of Technology, Cambridge, MA "Public Policy Program." March 1979.

Miami-Dade Community College, Miami, FL "The Long Search." March 1978.

Michigan State University, East Lansing, MI "Urban and Metropolitan Studies Major." March 1979.

Morehouse College, Atlanta, GA "Mirror Project." October 1977.

New College of the University of South Florida, Sarasota, FL "Environmental Studies Program." May 1979.

College of New Rochelle, New Rochelle, NY "School of New Resources." October 1978.

State University of New York at Geneseo, Geneseo, NY "Departmental Curricular Review Based on Student Outcomes." June 1979.

State University of New York at Plattsburgh, Plattsburgh, NY "Self-Assessment Program." June 1979.

University of North Carolina, Chapel Hill, NC "Public Policy Analysis." March 1979.

North Central College, Naperville, IL "The Lilly Program." March 1978.

North Shore Community College, Beverly, MA "International Studies Curriculum Development Project." January 1979.

North Texas State University, Denton, TX "Interdisciplinary Liberal Arts and Science Program." November 1978.

Oberlin College, Oberlin, OH "Public Service Studies Program." March 1979.

Our Lady of the Lake University, San Antonio, TX "Competency Learning Project." June 1979.

Pacific Lutheran University, Tacoma, WA "Integrated Studies Program." October 1977 and November 1978 (update).

Piedmont Technical College, Greenwood, SC "Competency-Based General Education Project." June 1979.

Quinnipiac College, Hamden, CT "Liberal Arts Humanities Program." May 1979.

San Fransisco State University, San Fransisco, CA "NEXA." May 1979.

Saddleback Community College, Mission Viejo, CA "Interdisciplinary Studies Program in Letters and Sciences." May 1979.

Saint Anselm's College, Manchester, NH "Portraits of Human Greatness." November 1978.

Saint Joseph's College, Rensselaer, IN "Core Curriculum." October 1977 and November 1978 (update).

Sangamon State University, Springfield, IL "Public Affairs Curriculum." May 1978.

Seton Hall University, Newark, NJ "Clinical Education Program." May 1978.

Stephens College, Columbia, MO "Stephens College Without Walls." October 1978.

Syracuse University, Syracuse, NY "Policy Studies Major." March 1979.

Texas Tech University, Lubbock, TX "Consumer Education for the Elderly." May 1978.

Utica College, Utica, NY "International Business Program." January 1979.

University of Washington, Seattle, WA "A New Program in Humanistic Liberal Education." January 1979.

Washington and Lee University, Lexington, VA "Society and the Professions: Studies in Applied Ethics." March 1978.

Wesleyan University, Middletown, CT "Master of Arts in Liberal Studies." October 1978.

Williams College, Williamstown, MA "Program in Political Economy." March 1979.

University of Wisconsin-Green Bay, Green Bay, WI "University Seminars Program." October 1977 and November 1978 (update).

Xavier University of Louisiana, New Orleans, LA "Urban Community Service." May 1978.

McBer and Company

Comprehensive Cognitive Assessment Battery

The Comprehensive Cognitive Assessment Battery is the result of a study of educational outcomes: the tests create actual tasks or situations that are homologous to the educational process and/or real life, and then ask subjects to create or make up responses. The study began with two premises: most previous evidence was probably more a reflection of the testing procedures used than of the efficacy of higher education; and, second, the new tests should be modeled on what students actually do than what researchers can easily score. In addition, the study attempted to measure variables that have significant consequences in adult life.

With support from the Fund for the Improvement of Postsecondary Education, McBer devised four tests that comprise the Comprehensive Cognitive Assessment Battery: Test of Thematic Analysis, a measure of critical thinking ability; Analysis of Argument, a measure of intellectual flexibility; Learning Style Inventory, a measure of perceived learning style; and Test of Self-Definition, a measure of whether a person habitually thinks in terms of causes and outcomes. The Learning Style Inventory is available now for use by colleges and universities throughout the country, while the other tests will be complete by late September.

For more information, contact:
Howard H. Russell
McBer and Company
137 Newburg Street
Boston, Massachusetts 02116
(617) 261-5570

National Center for Higher Education Management Systems

The Outcomes Structure

The Outcomes Structure is a taxonomy of the many types of results of postsecondary education. It categorizes them in three dimensions: audience (who or what is affected?), time (when does the outcome occur?), and type of outcome (what entity is, or intended to be, maintained or changed?). The structure can be used for academic planning, campus communication, evaluation, research, and other tasks.

The Outcomes Structure was designed to help people on campuses think in systematic, concrete, and specific outcome terms. Many people are accustomed to thinking about activities without consciously addressing the goals or results of those tasks. By using this questionnaire, faculty, students and administrators can identify needs and goals and agree upon priorities for them. Users of the process also maintain that communication is stimulated and increases. The process can be modified for targets as small as students majoring in a single department or as wide as state systems. Regardless of size, the Outcomes Structure provides a common language for analyzing the benefits of postsecondary education.

For more information, contact:
NCHEMS
Post Office Drawer P
Boulder, Colorado 80302

14

Resources

Alfred, Richard L. *Impacts of the Community and Junior College on Students.* Iowa City: American College Testing Program, 1975. (ED 108 729)
This overview of current literature on college impact examines the significance of the two year college. Alfred identifies eight variables central to the college experience which have been shown to have an enduring effect on the student. He suggests that the positive impact of the community college is reduced, due to the divergence between institutional and individual goals and value orientations, and suggests measures which could be taken to counter this situation.

Astin, Alexander W. *Four Critical Years: Effects of College on Beliefs, Attitudes and Knowledge.* San Francisco: Jossey-Bass, 1977.
In his investigation of student developmental change throughout the college years, Astin utitizes longitudinal data from a ten-year research project undertaken by the Cooperative Institutional Research Program of the American Council on Education, involving 200,000 students at 300 institutions. Student outcomes, as well as long-range effects, are examined in relation to institutional variation. Educational and public policy implications, such as the increasing role of economic factors in university decision making, are also discussed.

Barksdale, Milton K. *Values in Higher Education: Some Observations.* Richmond: Eastern Kentucky University, 977. (ED 145 787)
This study discusses the rationale and methodology for reintroducing values, morals and ethics into the educational experience, and provides descriptive procedures and instruments to measure the changing moral attitudes of students throughout their college years.

Bowen, Howard. *Investment in Learning.* Carnegie Council on Policy Studies in Higher Education. San Francisco: Jossey-Bass, 1977.
Bowen provides a comprehensive analysis of contemporary literature and research, ranging from philosophy to economics, in this analysis of the societal and individual effects of higher education and the extent to which American postsecondary education is worth its cost. Through an examination of the consequences of higher education, with a specific focus upon cognitive learning, emotional and moral development, and practical economic productivity, Bowen investigates the desired goals of the college experience and examines the extent to which these outcomes are achieved.

The Competent College Student. An Essay of the Objectives and Quality of Higher Education. Tennessee Higher Education Commission, April, 1977.
A catalogue of basic competencies and desired outcomes, ranging from reading skills to individual motivation, is provided as a statement of its own objectives and as an aid to institutions involved in the reexamination and clarification of their own goals.

Freedman, Mervin. *Impact of College.* New Dimensions in Higher Education, No. 4. Office of Education (DHEW), 1960. (ED 145 796)

Reviewing previous social scientific research, the author examines institutional role and structure and its relation and responsibility to the changing moral attitudes of its students. Freedman examines the characteristics of college populations with particular attention to the moral and mental changes which occur during the college years. Also suggested are institutional measures which could be taken to aid the moral development of the student.

Heath, D.H. *Growing Up in College: Liberal Education and Maturity*. San Francisco: Jossey-Bass, 1968.
This extensive case-study of university men is designed to discern the relationship between healthy maturing and a liberally educating environment. Heath develops a model of healthy student development through which the goals of a liberal education can be acquired and clarified. Through his examination of the correlation between environmental determinants and the maturing process, Heath proposes measures which can be taken to systematically study and conceptually integrate healthy development and institutional determinants.

Lenning, Oscar T., ed. *Improving Educational Outcomes*. New Directions for Higher Education, No. 16. San Francisco: Jossey-Bass, 1976.
This collection of essays on ways to improve student learning covers such topics as educating the poorly prepared students, improving the college environment to facilitate student progress, and comparing instructional techniques.

Lenning, Oscar T. *The Outcome Structure: An Overview and Procedures for Applying it in Post Secondary Education Institutions*. Western Interstate Commission for Higher Education. Boulder: Center for Higher Education Management Systems, 1977. (ED 157 454)
Designed to facilitate an effective and complete organization of postsecondary student outcomes, this manual presents an overview of the NCHEMS outcome structure for those who are attempting to introduce it on their campuses. Step-by-step, practical procedures and uses of the structure in planning, management and evaluation is provided.

Liberal Learning at Alverno College. Milwaukee, 1976. (ED 134 100)
This report offers a discussion of the eight objectives of the outcome-oriented curriculum, as well as a discussion of the orientation of the student upon entering college. The objectives range from an effective communicative ability to an understanding of the contemporary world; each area of competence is outlined separately.

Micek, Sidney W., I. Allen and Yong S. Lee. *Outcome Measures and Procedures Manual: Field Review Edition*. NCHEMS Technical Report Number 70, 1975.
This guidebook provides practical suggestions for institutional researchers and planners who are gathering data for a wide range of outcome information. Alternative procedures are presented that can be used to acquire information about postsecondary education outcome measures.

Pace, Robert C. and Associates. *Higher Education Measurement and Evaluation Kit*. Revised Edition. UCLA Graduate School of Education. Los Angeles: Laboratory for Research on Higher Education, 1975.
Designed to aid in the collection of outcomes, this loose-leaf kit contains information about student development and progress in relation to institutional educational experiences. The kit, divided into three sections, measures student progress and attainment, educational processes, and characteristics of the student body.

Warren, Jonathan R. *The Measurement of Academic Competence*. Berkeley: Educational Testing Service, 1978.
The report of a FIPSE-funded project, this paper describes the efforts of faculty members at fifteen California colleges and universities to assess competence in four areas of learning associated with general education: communications skill, analytic thinking, synthesizing ability, and social/cultural awareness. Questions required responses that took less than ten minutes to write and that could be scored reliably by sorting into four to seven categories. The report includes sample questions and useful comments on the process of devising such questions.

Winter, David G. "Defining and Measuring the Competencies of a Liberal Arts Education." Paper presented at the 1979 National Conference on Higher Education, sponsored by the American Association for Higher Education. 14pp.
This paper by the research director at McBer and Company makes a strong case for the need for measures of the effects of a liberal education. It also presents five important criteria that such measures should meet, with numerous examples. A clearly written paper, free of psychometric jargon.

Witmer, David R. *The Outcomes of Higher Education*, 1973. (ED 136 687)
As a result of the lack of systematic, comprehensive research on long term outcomes, the author reviews, in chronological order, the major literature on this topic since the turn of the century. Witmer concludes with a discussion of methodological problems.

The *Forum for Liberal Education* examines curricular programs and other academic activities at two- and four-year colleges, universities, and graduate and professional schools. The *Forum* invites your contribution of information on the following topics, which will be featured in upcoming issues: faculty development, honors programs, religious studies, creative arts, program evaluation, ethics and business, teaching values, and new ways of teaching the natural sciences.

The *Forum* will expand to eight issues for the 1979-1980 academic year. Subscription prices will remain at $12 for persons at AAC member institutions and $18 for all others. Reduced rates for group orders at a single institution or for multiple copies of back issues are available upon request. Please address all correspondence to: *FORUM*,
Association of American Colleges,
1818 R Street, N.W.,
Washington, D.C. 20009.